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ABSTRACT

This report examines shifts in the amount and composition of school spending growth over the 1991-96 period by analyzing expenditures in nine representative urban and suburban school districts. Major findings are: (1) the share of spending on regular education is shrinking; (2) special education funding grew to 19.0% of all school spending; (3) school lunch and breakfast programs grew to 4.8% of total school spending in 1996; (4) bilingual education programs grew to 2.5% of total school spending in 1996; and (5) the shift of school spending away from the regular education program continues a trend observed over the period from 1967 to 1991. It would, however, be inaccurate to conclude that special education or other special programs have been growing at the expense of regular education; such a conclusion would have to be based on speculation about what would have happened to regular education in the absence of the growth of special programs. This shift is a phenomenon worthy of policymakers' attention. The findings lend some support to the claims of those who deny that schools have wasted added funds received in the last 3 decades. (Contains eight tables, one figure, and four references.) (SLD)

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Where's the Money Going?

Changes in the Level and Composition of Education Spending, 1991-96

by Richard Rothstein

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Where's the Money Going?

Changes in the Level and Composition of Education Spending, 1991-96

by Richard Rothstein

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ISBN: 0-944826-75-X

RICHARD ROTHSTEIN is a research associate of the Economic Policy Institute, an adjunct professor of public policy at Occidental College, and a contributing editor of *The American Prospect*. He is the author (with Karen Hawley Miles) of the 1995 EPI report, *Where's the Money Gone? Changes in the Level and Composition of Education Spending*, and was co-editor (with Edith Rasell) of the EPI book, *School Choice: Examining the Evidence*. Several of his reports on education finance, international trade, and labor standards issues can be accessed at the Electronic Policy Network (<epn.org>). Correspondence regarding the findings or methodology of this report may be addressed to him at <rothstei@oxy.edu>.

In 1995, the Metropolitan Life Survey of the American Teacher found that teacher satisfaction with the funds available for use by their schools had grown to 49%, up from 42% in 1984. The survey also found that a sizeable minority – 34% – believed that the proportion of funds in their districts going to serve children with special needs was too high; 64% disagreed.

The pervasive level of concern among both teachers and the general public about school spending priorities prompted the Metropolitan Life Foundation to ask the Economic Policy Institute to conduct a study examining where the money is going and what the nation is getting in return.

Metropolitan Life Foundation made a major grant to EPI to support the research culminating in the 1995 report, Where's the Money Gone?, *which examined school spending from 1967 to 1991, and this followup,* Where's the Money Going?, *which updates the examination to 1996. The reports dispel the widespread perception that education spending per pupil has doubled in the last quarter century. Moreover, they find that, while education spending has indeed grown, what we think of as "regular education" has consumed only a small portion of the increase.*

Metropolitan Life Foundation is pleased to have supported this important research.

Metropolitan Life Foundation

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This study could not have been conducted without the generous assistance of officials in the nine school districts and in their state departments of education. Several of them went to great effort to find data that were not normally reported in the form required. I thank each of the district superintendents, who encouraged staff cooperation, and am particularly grateful to the following:

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EXECUTIVE SUMMARY

Enrollment in American public education has grown rapidly in recent years, and schools have had to increase their real (inflation-adjusted) spending simply to maintain the same level of per-pupil resources. At the same time, however, school spending per pupil has been flat. For instance, real per pupil spending across the nation was roughly stable over the 1991-96 period, growing by only 0.7% (or 0.14% on an average annual basis). This was a significant slowdown from the growth in per pupil spending of 61% (or 2.0% on an average annual basis) from 1967 to 1991.

In the most recent period, some districts have actually had to reduce regular per pupil education spending in response to the combined pressures of enrollment growth, inflation, and shifting priorities toward spending on special populations.

Real per pupil spending across the nation was roughly stable over the 1991-96 period, growing by only 0.7%.

This report examines shifts in the amount and composition of school spending growth over the 1991-96 period by analyzing expenditures in nine representative districts. It finds:

- The share of spending on regular education is shrinking. By the 1996 school year, regular education accounted for only 56.8% of all school spending, down from 58.5% in 1991.
- Special education spending grew to 19.0% of all school spending in 1996, up from 17.8% in 1991.
- School lunch and breakfast programs grew to 4.8% of total school spending in 1996, compared to 3.3% in 1991.
- Bilingual education programs grew to 2.5% of total school spending in 1996, up from 1.9% in 1991.
- The shift of spending away from the regular education program continues a trend observed over the 1967-91 period. However, in an era of stagnant overall school spending, such as the 1990s, this shift has translated into an actual reduction in regular education spending per pupil in several school districts.

These findings notwithstanding, it would be inaccurate to conclude that special education or other special programs have been growing at the expense of regular education: such a conclusion would have to be based not on data but rather on speculation about what would have happened to regular education in the absence of the growth of special programs. Nonetheless, the continued pattern of rapid growth in special program spending combined with slow growth in regular education spending is a phenomenon worthy of policy makers' attention.

INTRODUCTION

Everyone from education experts to casual observers frequently speak of the "inefficiency" of U.S. elementary and secondary education. The claim rests in part on a belief that taxpayers have poured vast new resources into public education but have little in the way of results to show for this investment. "After allowing for inflation," according to a 1994 report from the Brookings Institution, "the amount spent on each pupil in America's schools has increased unabated for a century, with steady growth at about 3.5% a year....Despite increasingly large amounts of resources devoted to schools, student performance has shown few tangible improvements....[O]ur schools are demonstrably inefficient" (Hanushek et al. 1994).

Because elementary and secondary education is inherently a low productivity industry, inflation adjustments based on productivity and prices in an average industry will understate inflation in education.

In a previous report we showed that such conclusions rely on two serious mismeasurements (Rothstein and Miles 1995). First, we noted that the conclusion does not really "allow for inflation," as claimed. Because elementary and secondary education is inherently a low productivity industry (using a much higher proportion of labor and less technology than the average industry), inflation adjustments based on productivity and price trends in an average industry will inevitably understate inflation in education. The Brookings report, for example, adjusts nominal school spending for inflation using the gross domestic product implicit price deflator, which includes data from all components of final demand in the economy, including the most technologically advanced manufacturing. Price reductions from technological improvements are mostly not available to schools, which continue to rely primarily on teachers' labor for delivery of instruction. Properly adjusting for inflation in schools, therefore, requires an index based not on all components of final demand but instead on labor-intensive low-productivity growth industries. We suggested using a modified service sector index, called the net services index (NSI), to adjust school expenditures for inflation, because services, like schools, tend to use larger proportions of labor than does manufacturing, and productivity gains from new capital-based technologies are less accessible in services than in manufacturing.[1]

Using this more accurate inflation adjustment, and examining the years 1967 to 1991,[2] our earlier report found that about 39% of the commonly perceived doubling in per pupil spending resulted from this one mismeasurement problem alone. Allowing for inflation using the NSI, real per pupil spending increased by 61% over that period, or about 2% a year.

The second mismeasurement concerns the data used for comparison of "resources" to "student performance." While our earlier report offered no conclusions about whether regular academic student performance has shown "tangible improvements," we noted that the resources (per pupil spending) against which the efficiency of these improvements is normally measured are devoted to a wide range

of programs, academic instruction being only one. Schools also provide special education for the disabled, vocational education, lunch programs, and special instruction for at-risk youth and for economically disadvantaged students. Comparing the combined expenditures for all these programs to the outcomes of only one of them (academic achievement of regular students) provides a misleading picture.

This mismeasurement is difficult to correct because schools do not report their expenditures by program. Instead, districts, states, and the federal government report education expenditures by "function" (administration, instruction, etc.) or by "object" (salaries, benefits, supplies, etc.). These categories cut across varied school programs, making it difficult to discern the efficiency of spending on regular, special, or vocational education or on noninstructional programs like health or nutrition. Because school finance is normally concerned with "function" and "object," not programs, there are no conventionally accepted definitions of programmatic categories or their components.

Comparing the combined expenditures for all programs to the outcomes of only one (academic achievement of regular students) provides a misleading picture.

To overcome this reporting failure, we selected nine typical districts from across the nation to mirror the experience of U.S. elementary and secondary education. We examined the expenditure reports of these districts for 1967 and 1991, and recategorized each expenditure of each of the districts into a programmatic group. In these typical districts, real (NSI-adjusted) spending on "regular education" had grown by only 30.8% in this 24-year period, or an average of about 1.1% a year.[3] Regular education consumed 58.5% of all spending in 1991, compared to 80.1% in 1967. Of the "new" money in 1991 (i.e., total per pupil spending in 1991 in excess of the level in 1967), 36.7% had gone to special education, 27.1% to regular education, 5.7% to food services, 7.2% to programs for "at-risk" youth, and the balance to other smaller programs. In 1967 special education consumed just 3.6% of total spending; by 1991 its share had grown to 17.8%.

The "inefficiency" question, therefore, is whether a 1% per year annual growth in regular education expenditures was accompanied by comparable growth in regular students' academic outcomes during the 1967-91 period. Because the state of knowledge regarding measurement of outcomes may be even more primitive than that regarding expenditure accounting, this may be an impossible question to answer with existing data. Neither the claim of inefficiency nor its opposite can be made with confidence.

This report examines whether the trends detected in the 1967-91 period continued in more recent years. We have extended the calculation of the NSI to 1996, and we returned to the nine sample districts to collect expenditure data for the 1996 school year. The following pages describe the new findings.

CHANGES IN SPENDING FOR ALL ELEMENTARY AND SECONDARY PUBLIC EDUCATION

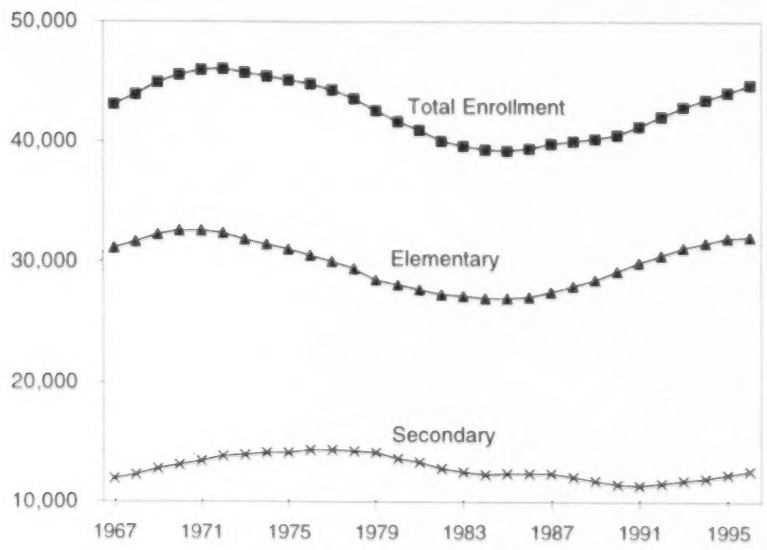
Public school enrollment in 1996 was about 8% greater than it had been only five years before.

The previous report, *Where's the Money Gone?*, focused on the years 1967 and 1991. During this period, total public school enrollment fell and then began to climb, so that at the end of the initial study period total enrollment was almost the same as it had been at the beginning. Public school enrollments have been climbing since 1981, when a strong "baby boom echo" began to dominate other trends in elementary school enrollment. About eight years later, as this wave moved into secondary schools, secondary enrollment began to grow as well. As a result, public school enrollment in 1996 was about 8% greater than it had been only five years before (see **Figure 1**).

In order to maintain the same level of per pupil spending in 1996, public schools would have had to receive real new total resources equal to 8% of total expenditures in 1991. Total expenditures of all elementary and secondary schools nationwide did increase in this period, from $229 billion in 1991 to $294 billion in 1996, a 28.0% nominal increase (U.S. DOE 1996, Table 31). But with inflation in net services at 17.3%[4] and enrollment growth at 8.4%, this 28.0% increase in nomi-

FIGURE 1

Public School Enrollment, 1967-96 (in Thousands)



Source: U.S. DOE (1996), Table 3.

nal spending translates into a small 0.7% real growth in per pupil spending between 1991 and 1996.

As **Table 1** shows, average per pupil spending in 1996 was $6,576, compared to $6,529 in 1991 and $4,053 in 1967 (all in 1996 dollars). Thus, national real per pupil expenditure growth from 1967 to 1996 was 62%, an average annual increase of 1.7%. Table 1 also shows how per pupil expenditures have changed using a conventional inflation adjustment, the consumer price index (CPI). As noted above, because productivity growth does not reduce costs in schools to the same extent that it does in the production of most other goods and services purchased by consumers, an economy-wide adjustment like the CPI tells an inaccurate story of education spending, and leads to the commonly repeated view that per pupil spending has "more than doubled" in the last three decades. (Table 1 shows a 104% CPI-adjusted growth for 1967-96.) Such rapid growth, as we show below, characterized very few districts, while most school districts posted much lower rates of real spending increase.[5]

TABLE 1

Average Per-Pupil Spending, All U.S. Public School Districts, Elementary and Secondary

		Inflation Indices			
	Per Pupil Spending (Current $)	Consumer Price Index, CPI-U	Net Services Index, NSI	Per Pupil Spending in 1996 Dollars	
Year	1967	1967 = 100	1967 = 100	CPI-U Based	NSI Based
1967	$687	100	100	$3,229	$4,053
1991	5,566	406	503	6,451	6,529
1996	6,576	470	590	6,576	6,576
Total Change (%)					
1967-91	710%	306%	403%	100%	61%
1991-96	18	16	17	2	0.7
1967-96	857	370	490	104	62
Annual Change (%)					
1967-91	9.1%	6.0%	7.0%	2.9%	2.0%
1991-96	3.4	3.0	3.2	0.4	0.1
1967-96	8.1	5.5	6.3	2.5	1.7

Source for per pupil expenditures: National Center for Education Statistics, *Digest of Education Statistics*, 1996, Tables 3 and 31.
Source for consumer price index: *Economic Report of the President*, February 1997, Table B-60 (adjustment to 1967 base by author).
Source for net services index: Calculations of Lawrence Mishel, Economic Policy Institute, based on data furnished by the Bureau of Labor Statistics.

CHANGES IN SPENDING, NINE SAMPLE DISTRICTS

As **Table 2** shows, the nine sample districts investigated for this report reflected, on average, a range of experience somewhat different from the typical national experience. Enrollment growth was slower than in the nation as a whole, 5.1% in the nine districts compared to 8.4% nationally.[6] Nominal spending in the nine districts increased by 28.7% in the 1991-96 period (compared to 28.0% nationally), but, mostly because these districts had less enrollment growth to overcome, real per pupil spending increased by 6.2%, compared to the 0.7% growth experienced in the nation as a whole. Over the full period covered by this study, 1967 to 1996, real per pupil spending increased by 85.7% in the nine districts, an average annual increase of 2.1%.

Nominal spending in the nine districts increased by 28.7% in the 1991-96 period, compared to 28.0% nationally.

In the nine sample districts, the greatest decline in real per pupil spending in the last five years occurred in Los Angeles. There, spending dropped by 6.5%,[7] primarily due to the severity of an early 1990s recession in California that led to reduced state sales and income tax revenues and reduced state aid to the district. (In California, elementary and secondary education are constitutionally guaranteed a fixed share, about 40%, of state general fund revenues.) The district reduced all employee salaries by 10% in 1992, and it did not restore the previous salary levels until 1997 (following the last year for which we collected data). Anne Arundel, Md. and Boulder, Colo. also saw real reductions in their per pupil spending from 1991 to 1996, primarily because a growth in real revenue could not overcome very large enrollment increases (of 10.1% and 11.9%, respectively) in this period.

In our previous study, we found that the Spring Branch, Texas district, in a suburb of Houston that has become increasingly working class, minority, and renter-occupied in the last 30 years, had increased real per pupil spending at the most rapid rate, more than doubling its expenditure from 1967 to 1991, an average annual real per pupil spending growth rate of 3.7%. Spring Branch continued this pattern of 3.7% annual new per pupil investment (19.8% total growth in the 1991-96 period), even with 9.4% enrollment growth. The state of Texas increased its funding of the Spring Branch district significantly in this period, partly reversing a decline of state funding in the period immediately prior to 1991. In addition to granting teacher salary increases in excess of inflation over the last five years, Spring Branch spent much of this new money on a program to put a computer on the desk of each teacher in the district in 1996.[8]

Similarly, Middletown, N.Y. managed to increase per pupil spending by 6.5% over the five-year period, even in the face of 8.5% enrollment growth. Much of this expenditure growth is represented by major school building renovation programs initiated by the district during the period as well as instructional computer purchases. Funds for this expenditure growth initially came from bond issues.[9]

TABLE 2

Real Spending Growth in Nine Elementary and Secondary School Districts, 1967-96 and 1991-96

District	Real Per Pupil Spending (In 1996 Dollars)			1967-96 Real Per Pupil Spending Growth		1991-96 Real Per Pupil Spending Growth		Enrollment Growth
	1967	1991	1996	Total	Annual	Total	Annual	1991-96
Anne Arundel, Md.	$3,396	$6,690	$6,395	88.3%	2.2%	-4.4%	-0.9%	10.1%
Bettendorf, Iowa	3,598	5,276	5,458	51.7	1.4	3.4	0.7	6.5
Boulder, Colo.	4,649	6,372	6,053	30.2	0.9	-5.0	-1.0	11.9
Claiborne, Tenn.	2,101	3,633	4,527	115.4	2.7	24.6	4.5	-0.6
E. Baton Rouge, La.	3,224	4,958	4,997	55.0	1.5	0.8	0.2	-4.1
Fall River, Mass.	3,480	5,762	6,721	93.1	2.3	16.6	3.1	0.4
Los Angeles, Calif.	4,064	6,723	6,284	54.6	1.5	-6.5	-1.3	3.5
Middletown, N.Y.	5,132	9,420	10,036	95.5	2.3	6.5	1.3	8.5
Spring Branch, Tex.	2,545	6,100	7,309	187.2	3.7	19.8	3.7	9.4
District-Weighted Average Rate of Change				85.7%		6.2%		5.1%
Average Annual Rate of Change					2.1%		1.1%	

Claiborne, Tenn. and Fall River, Mass. also increased per pupil spending (by 24.6% and 16.6%, respectively) while their enrollments were mostly stable. Claiborne benefited from a major infusion of new state money following the passage of Tennessee's Basic Education Program (BEP) in 1992. BEP required only a 14% local match for new state funds. In Massachusetts, the Education Reform Act of 1993 required all districts to maintain a minimum tax "effort" (an approximately equal share of local property tax wealth), with the state now giving substantial new funds to districts (like Fall River) whose schools were underfunded because of low assessed values.

CHANGES IN SPENDING PRIORITIES: SHARES OF EXPENDITURES BY PROGRAM IN THE NINE SAMPLE DISTRICTS

As noted, our earlier report documented a significant reduction from 1967 to 1991 in the share of total school spending going to regular education — from 80.1% to 58.5% — while the share going to special education rose from 3.6% to 17.8%. This analysis of shares of total spending going to each program holds true regardless of the index used to adjust for inflation, since the calculations of shares uses current rather than inflation-adjusted dollars in each year.

By 1996, regular education had fallen to 56.8% of total school spending, while special education continued to increase its share, rising to 19.0%.

Table 3 shows that the trends we documented earlier have continued in the last five years, but at a somewhat slower rate. By 1996, regular education had fallen to 56.8% of total school spending, while special education continued to increase its share, rising to 19.0%. Nutrition programs also increased their share, rising to 4.8%, from 3.3% in 1991.[10]

Bilingual education also increased its share, from 1.9% in 1991 to 2.5% in 1996. Expenditure increases in bilingual education most often result from district attempts to recruit bilingual teachers by paying bonuses above the regular salary schedule, from expenditure of federal Title I funds to hire bilingual classroom aides, or from the purchase of primary-language curriculum materials and resources. In Spring Branch, bilingual education grew from 5.3% to 8.1% of total spending. The district recruits bilingual teachers with a $3,000 pay differential over regular teachers, so as the number of non-English-speaking children in the district has increased, bilingual program expenditures have increased apace.

Two districts in the sample that had very small bilingual programs in 1991 experienced immigration flows during this five-year period that caused bilingual programs to expand. In Middletown, bilingual education doubled its share, from 0.6% of total spending in 1991 to 1.2% in 1996. A bilingual coordinator was hired for the first time during this period, and additional primary language and ESL (English as a Second Language) teachers were hired. By 1996, Hispanic students had surpassed African American students as Middletown's most numerous minority group. In East Baton Rouge, La., spending for bilingual education grew from 0.3% of total spending in 1991 to 0.7% in 1996.

In Fall River, Boulder, and Los Angeles, where bilingual education was already important in 1991, spending increased. Even the Appalachian community of Claiborne recorded its first bilingual education expenditures, as Spanish-speaking children moved into the district for the first time. Bilingual education programs, in this initial stage, were still being operated out of the district's special education division, although our data analysis attempted to separate Claiborne's bilingual from special education expenditures.

These increases in the shares of total spending going to special education, nutrition, and bilingual programs were offset by corresponding decreases in shares

TABLE 3
Shares of Total Per Pupil Spending for Each Program, Average of Nine Districts, 1967, 1991, and 1996

Program Area*	1967	1991	1996
Regular Education	80.1%	58.5%	56.8%
Special Education	3.6	17.8	19.0
Food Services	1.9	3.3	4.8
Compensatory Education	5.0	4.2	3.5
Pupil Support (Attendance and Counseling)	2.1	3.5	3.2
Transportation (Regular Education)	3.6	3.3	3.1
Vocational Education	1.4	2.8	2.7
Bilingual Education	0.3	1.9	2.5
Desegregation	0.0	1.9	1.5
Regular Health & Psychological Services	1.4	1.0	1.1
After School Athletics	0.4	0.7	0.6
"At Risk" Youth Education, Alternative Education	0.1	0.6	0.6
Security and Violence Prevention	0.1	0.5	0.6
Total	100.0%	100.0%	100.0%
Overhead			
School and General Administration	9.8%	9.8%	10.1%
Operations and Maintenance	15.8	14.5	15.9
District Compensation, as % of All District Expenditures	77.9%	78.1%	76.1%
Benefit Ratio (All Benefits, Incl. State, to District Salaries)	9.4	23.6	27.5
Benefits as a Share of Total Compensation	8.5	18.8	21.3

*Programs listed in order of 1996 share of total per pupil spending.

of expenditures for other programs. In particular, compensatory education expenditures (most but not all of which are reimbursed by the federal government) declined as a share of total expenditures. However, three districts (East Baton Rouge, Los Angeles, and Spring Branch) saw real per pupil compensatory education grow substantially, in part because their census entitlements to Title 1 money grew as the result of greater poverty in the district, and in part because state government increased compensatory spending notwithstanding the decline of federal funds. Some of the apparent overall decline of compensatory education spending may simply reflect poor data: when districts spend their own funds, not reimbursed by the federal government, on special programs for low-achieving minority or poor students, they may not always report this spending in ways that make it possible to distinguish the spending from regular education spending. Some of the compensatory education decline, however, may reflect a shift of expenditures from compensatory education for disadvantaged low-achieving English-speaking children to bilingual education. Combined, compensatory and bilingual education consumed 6% of total resources in both 1991 and 1996.

NET NEW SPENDING: WHERE THE MONEY'S GOING

In *Where's the Money Gone?*, we subtracted real per pupil spending in 1967 from real per pupil spending in 1991 and called this "net new spending." We then analyzed the programmatic distribution of this new money, finding that special education received the largest share, 36.7%. Only 27.1% of the new money went to regular education.[11]

These trends, dramatic from 1967 to 1991, have accelerated further from 1991 to 1996. As **Table 4** shows, special education consumed 40.0% of "net new spending" for the full 1967 to 1996 period, while regular education consumed only 23.3%.[12] Of the new money, 9.2% went to lunch and breakfast programs for poor or near-poor children.

Special education consumed 40.0% of 'net new spending' for the full 1967 to 1996 period, while regular education consumed only 23.3%.

In our earlier report, we cautioned that these data alone do not show that special education growth came at the expense of regular education. It is possible that, were it not for special education needs, total school spending would have grown by less, and regular education would have received no more funds than it presently receives. This caution is still in order. However, as special education continues to consume an ever greater share of new education funds, it becomes more difficult to avoid a concern that this growth may be occurring at the expense of regular education. The fact that a program that consumes 19% of total funds is consuming 40% of new funds should attract the attention of policy makers. Because special education has had legal priority over regular education (students with special needs, unlike regular education students, have a judicially enforceable right to an "appropriate" education), there is a possibility that special education's legal claims are being satisfied from funds that would otherwise have gone to regular education. In recent years, some state courts have also begun to assert the right of regular students to an "adequate" education, although this right now exists in few states and has not yet been well developed even where decreed. If this trend continues, real regular education spending could begin to grow rapidly, and policy makers may be forced to confront difficult decisions about the apportionment of funds between regular and special education.

TABLE 4
Shares of Net New Money by Program, 1967-96

Program Area	Share of Total Expenditures, 1996 (See Table 3)	Share of Net New Money* 1967-96
Regular Education	56.8%	23.3%
Special Education	19.0	40.0
Food Services	4.8	9.2
Compensatory Education	3.5	2.0
Pupil Support (Attendance and Counseling)	3.2	4.9
Transportation (Regular Education)	3.1	2.8
Vocational Education	2.7	3.9
Bilingual Education	2.5	5.2
Desegregation	1.5	4.0
Regular Health & Psychological Services	1.1	1.2
After School Athletics	0.6	1.0
"At Risk" Youth Education, "Alternative Ed."	0.6	1.4
Security and Violence Prevention	0.6	1.0
Total	100.0%	100.0%

* Based on net services index (NSI) inflation adjustment.

REGULAR EDUCATION SPENDING: DIVERGENT TRENDS AMONG DISTRICTS

Although in each sample district regular education was a smaller *share* of total expenditures in 1996 than in 1967, in all but one sample district real spending in this category increased nevertheless. But as **Table 5** shows, real growth of regular education varied widely among districts in the sample.

In Los Angeles, however, regular education spending per pupil was actually 18.7% less in 1996 than in 1967—a substantial real reduction in per pupil resources. This does not mean, however, that individual students in the regular education program received 18.7% fewer resources. Because a smaller proportion of pupils were in the regular education program as well, the reduction in resources per regular education pupil would have been smaller than the reduction in resources per all pupils. In each case in this analysis, the expenditures reported per pupil in each program are the expenditures per total district enrollment, not the expenditures per the particular pupils served by that program. This report does not investigate the intensity of resource use by pupils within programs, but only relative spending shares and growth between programs.

Although in each sample district regular education was a smaller share of total expenditures in 1996 than in 1967, in all but one real spending in this category increased.

While Los Angeles reduced the real per pupil resources for regular education from 1967 to 1996, two districts, Spring Branch and Claiborne, doubled regular education resources. Note that these are the two districts where total real resources per pupil also doubled and, in the case of Spring Branch, almost tripled.

Anne Arundel, Fall River, and Middletown, where total expenditures nearly doubled, were also able to increase real per pupil spending on regular education over the 29-year period. But Boulder, East Baton Rouge, and Bettendorf, Iowa, where total expenditure growth was more modest, were able to increase regular education spending by much less than 1% a year. In the case of Boulder, this small real increase was partly attributable to very rapid inflation from 1967 to 1996 (net services inflation was 637%, compared to 490% nationally), so Boulder's substantial nominal expenditure increases did not result in substantial real new resources.

Most of the reduction in Los Angeles' regular education per pupil spending took place in the last five years: from 1967 to 1991, regular education per pupil spending declined by only 0.1% a year, while from 1991 to 1996 the decline was at a 3.4% annual rate. The 15.8% drop in Los Angeles' regular education per pupil spending from 1991 to 1996 was offset by big growth in some other programs, notwithstanding the overall reduction of 6.5% in total per pupil spending (see **Table 6**). The biggest of these was student health and psychological services, which saw five-year growth of 44.5%, and food services, with five-year growth of 38.6%. The drop in regular education spending primarily reflects the 10% salary reduction imposed in 1992; to some extent, it also reflects a drop in the proportion of students

TABLE 5
Real Change in Regular Education Spending, 1967-96 and 1991-96

	Regular Education Spending Per Pupil ($1996)			1967-96			1991-96	
				All Spending	Regular Education		Regular Education	
	1967	1991	1996	Total Change	Total Change	Annual Change	Total Change	Annual Change
Anne Arundel, Md.	$2,818	$4,137	$3,951	88.3%	40.2%	1.2%	-4.5%	-0.9%
Bettendorf, Iowa	3,316	3,749	3,785	51.7	14.1	0.5	1.0	0.2
Boulder, Colo.	3,923	4,077	4,079	30.2	4.0	0.1	0.1	0.0
Claiborne, Tenn.	1,206	1,920	2,419	115.4	100.6	2.4	26.0	4.7
E. Baton Rouge, La.	2,438	2,954	2,693	55.0	10.5	0.3	-8.8	-1.8
Fall River, Mass.	2,644	2,961	3,713	93.1	40.4	1.2	25.4	4.6
Los Angeles, Calif.	3,539	3,417	2,877	54.6	-18.7	-0.7	-15.8	-3.4
Middletown, N.Y.	4,006	5,447	5,198	95.5	29.7	0.9	-4.6	-0.9
Spring Branch, Texas	2,118	3,667	4,189	187.2	97.8	2.4	14.2	2.7
District-Weighted Average Change				85.7%	35.4%	0.9%	3.7%	0.6%

Table 6
Real Growth (Reductions) in Per Pupil Spending, by Program, 1991-96, Nine Districts

	Average, Nine Districts**	Anne Arundel, Md.	Bettendorf, Iowa	Boulder, Colo.	Claiborne, Tenn.
Regular Education	3.7%	-4.5%	1.0%	0.1%	26.0%
Special Education	11.7	3.0	13.5	-10.6	35.9
Food Services	71.9	-4.5	49.2	225.5	76.0
Compensatory Education	-11.0	-26.6	-17.5	-51.3	-61.5
Pupil Support (Attendance and Counseling)	4.6	-4.9	17.3	-56.0	94.0
Transportation (Regular Education)	-4.0	-18.5	-53.6	31.8	22.0
Vocational Education	52.7	-14.5	372.0	-53.4	12.2
Bilingual Education	57.6	-11.6	*	46.3	*
Desegregation	-32.9	13.3	-35.2	-30.9	*
Regular Health & Psychological Services	87.3	262.8	-14.9	-20.9	80.7
After School Athletics	-7.0	-74.6	3.7	-38.2	*
"At Risk" Youth Education, Alternative Ed.	7.7	29.4	85.9	144.8	-95.6
Security and Violence Prevention	-15.2	-46.6	37.1	15.9	*
Total	6.2%	-4.4%	3.4%	-5.0%	24.6%

	E. Baton Rouge, La.	Fall River, Mass.	Los Angeles, Calif.	Middletown, N.Y.	Spring Branch, Tex.
Regular Education	-8.8%	25.4%	-15.8%	-4.6%	14.2%
Special Education	16.5	17.9	-1.1	25.9	4.2
Food Services	35.8	-30.2	38.6	200.0	56.2
Compensatory Education	43.8	-20.5	24.9	-45.5	55.4
Pupil Support (Attendance and Counseling)	-14.4	-15.2	10.3	10.6	0.3
Transportation (Regular Education)	7.6	7.1	-17.5	-9.7	-5.1
Vocational Education	9.1	6.4	-3.7	75.6	70.9
Bilingual Education	118.7	32.3	6.1	127.4	84.3
Desegregation	-100.0	*	-11.9	*	*
Regular Health & Psychological Services	373.2	49.8	44.5	-11.2	21.5
After School Athletics	*	3.9	1.7	53.8	0.8
"At Risk" Youth Education, Alternative Ed.	-77.0	-86.5	-16.3	33.4	50.9
Security and Violence Prevention	-66.8	24.9	-3.6	*	-67.4
Total	0.8%	16.6%	-6.5%	6.5%	19.8%

* Signifies no significant expenditures in 1991; these districts may have had expenditures in 1996, however.

** The nine-district average for any program excludes districts with nonexistent or insignificant expenditures for that program in 1991.

in the regular education program (as opposed to special needs programs). On the other hand, an increase in health and food service programs, despite the same salary reduction there, reflects some combination of more students served by these programs and more resources for the students served. Food service is one case where salaries are a small proportion of total expenditures (most of the spending is for food), so the district-wide salary reduction had little impact on total spending on this program.

Some districts in the sample apparently worked hard to maintain regular education programs, notwithstanding overall expenditure restraint from 1991 to 1996.

Some districts in the sample apparently worked hard to maintain regular education programs, notwithstanding overall expenditure restraint from 1991 to 1996. In Anne Arundel, for example, while total expenditures declined and special programs expanded, regular education declined only about as much as the overall decline (Table 6). Significant savings were found in such categories as transportation, where bus routes were rationalized and schedules were tightened so that fewer but fuller buses could be used. Other big savings came from energy conservation.

Table 6 shows, for each of the nine districts, the real growth (or reduction) in per pupil spending for each program in the last five years, 1991-96. This table should be examined with extreme caution. In some cases, very large percentage increases in a program mean only that the program was very small in 1991; after large increases, it may still be small. For example, relatively few Boulder students received free or reduced-price lunches in 1991. Expenditures on this program grew by 225.5% in five years, but the program is still small compared to other districts. In 1996, food services were only 3.3% of this relatively affluent community's total school expenditures (and only 1.1% and 1.5%, respectively, of expenditures in Anne Arundel and Bettendorf), compared to 12.2% in the Appalachian community of Claiborne or 7.6% in the urban district of East Baton Rouge.[13] Hardly a better illustration can be offered of why expectations should be tempered that all districts can produce similar academic outcomes if given the same total resources: Claiborne and East Baton Rouge use a substantial part of their resources for programs other than regular education.

SPECIAL EDUCATION: GROWTH, WITH SOME RESTRAINTS

As noted above, special education's share of total expenditures grew from 3.6% to 19.0% of total spending from 1967 to 1996 in the nine districts. In the last five years, total special education spending divided by total elementary and secondary enrollment (per pupil special education spending) has been growing, on average, by 2.2% a year, or 11.7% for the five-year period. In contrast, total per pupil spending has grown at only a 1.1% annual rate in the nine districts. **Table 7** shows the variation of special education spending growth between districts. In Spring Branch, special education grew from 2.9% to 12.7% of all spending from 1967 to 1991, but then the district restrained the growth of the program, and special education spending dropped to 11.0% by 1996, the smallest share devoted to special education of any district in the sample. The next smallest share was in Claiborne County, a poor Appalachian mountain district where special education spending grew from 3.7% to 13.4% of all spending from 1967 to 1996. Spring Branch and Claiborne, it will be recalled, are the two districts that posted the largest real increases in per pupil spending for regular education in this period. The fact that the districts where special education was the smallest share were also the districts where regular education grew the most suggests that there may be some validity to worries that nationwide growth in special education spending is coming at the expense of regular education spending.

Special education's share of total expenditures grew from 3.6% to 19.0% of total spending from 1967 to 1996 in the nine districts.

On the other hand, these districts may not be able to continue such relatively low levels of special education spending. In Spring Branch, for example, negotiation with an advocacy group representing dyslexic children recently resulted in a settlement in which the district agreed to expand its program for these children. In the 1997 school year (after the last year for which this report collected data), Spring Branch added 25 new special education teaching positions as a result of these negotiations.

At the other extreme of special education spending share, Middletown saw special education grow from only 2.3% of all spending in 1967 to 25.9% in 1996; this was the largest share devoted to special education of any district in the sample. When Middletown administrators were interviewed for the initial report, some believed that Middletown's special education programs were so large in 1991 because the district's high-quality programs encouraged parents whose children needed special education services to move into the district. But administrators no longer believe that this can explain the continued growth of special education since 1991. It is now more likely, they believe, that the increase is attributable to a large proportion of children born in the district with fetal drug and alcohol syndrome.

This wide range of spending shares for special education is not the result of differences between higher-cost and lower-cost regions of the country, because these

TABLE 7
Changes in Spending for Special Education

	Special Education Spending As Percent of Total Spending			Change in Special Education Share,	New Money for Special Education as % of All New Money	Change in Per Pupil Special Ed. Spending
	1967	1991	1996	1967-96	1967-96	1991-96
Anne Arundel, Md.	2.6%	17.9%	19.3%	16.6%	38.1%	3.0%
Bettendorf, Iowa	3.0	16.4	18.0	15.0	46.9	13.5
Boulder, Colo.	4.4	16.0	15.1	10.7	50.6	-10.6
Claiborne, Tenn.	3.7	12.3	13.4	9.8	21.9	35.9
East Baton Rouge, La.	3.9	17.0	19.6	15.7	48.2	16.5
Fall River, Mass.	7.7	22.3	22.5	14.8	38.5	17.9
Los Angeles, Calif.	2.3	18.1	19.2	16.9	50.1	-1.1
Middletown, N.Y.	2.3	22.0	25.9	23.6	50.7	25.9
Spring Branch, Tex.	2.9	12.7	11.0	8.1	15.4	4.2
Average	3.7%	17.2%	18.2%	14.6%	40.0%	11.7%

results reflect special education spending as shares of total elementary and secondary spending; both special education and total spending are expressed in local dollars. The differences could be attributable to the fact that some districts are more prone to classify difficult-to-educate children as "special education," or it could be attributable to the fact that some districts, once children are identified as needing special education, provide more resources or more expensive resources to these children than do other districts. Because this analysis is based on examination of expenditure data only, it can provide evidence for neither of these interpretations.

In the last five years, there was also considerable variation in the *growth* of special education spending in the nine districts (Table 7). In Claiborne, where special education still consumes a relatively small share of total expenditures, per pupil special education costs grew by 35.9% from 1991 to 1996. Increased requests by parents and teachers to have children tested for "high incidence" (lesser severity) conditions like attention deficit disorders prompted Claiborne to hire its first full-time psychologist during this period, and relatively higher numbers of children were classified into the special education program as a result. And, as noted, in Middletown, a district where special education spending already took a relatively large share of total school costs in 1991, special education spending grew by an additional 25.9% in this period. Boulder, on the other hand, apparently attempted to restrain special education spending: it declined in real per pupil terms by 10.6% from 1991 to 1996, while total per pupil spending declined by only 5.0%. In Los Angeles, although real per pupil special education spending declined by 1.1%, total per pupil spending declined by 6.5%, suggesting that special education grew in relative priority.

In Anne Arundel, per pupil special education spending grew by only 3.0% from 1991 to 1996; yet with an overall decline in per pupil spending of 4.4%, special education's relative priority continued to increase. The district enacted a number of programs to restrain special education growth: it became more aggressive, for example, in defending its IEP (Individualized Education Program) decisions from legal challenge. (One district administrator estimates that, while the district previously won only 30% of such cases that went to court, it now wins 90%.) District decisions about special education placement are initially made by local school teams, and the district has initiated training programs to help these teams design programs to meet children's needs without expensive additional services. Nonetheless, the Anne Arundel special education population has increased by 4% a year each year for the last five years, about twice the rate of total enrollment increase. Most of this population growth has resulted from referrals of children who haven't learned to read by the end of third grade. These children are frequently referred to psychologists, who diagnose a learning disability.

Teacher costs grew from 50.3% of all special education costs in the sample districts in 1991 to 51.7% in 1996.

Table 8 examines how special education funds were spent in the nine sample districts and the changes from 1991 to 1996. (Special education programs were too small, and reported data too coarse, to make display of 1967 data here meaningful.) Teacher costs grew from 50.3% of all special education costs in 1991 to 51.7% in 1996. (These data consistently classify speech, hearing, and vision specialists as teachers, although some districts, in their own reports, consider this category of compensation as expenditures for other health professionals, not instruction.)

These data on teachers as a share of special education expenditures should be treated with caution. Available data do not permit precision, and they are valuable only for understanding trends. The primary impediment to identifying precise figures is that practice varies widely in whether special services are delivered directly or are contracted out either to private special education schools or to state or regional public agencies. For example, the Middletown district pays a fee to a regional "BOCES" (Board of Cooperative Educational Services), a collaborative with neighboring small school districts. The BOCES uses its fee revenue from school districts to provide special education services. Though some BOCES services may be delivered by certified teachers, the fee to BOCES appears in the Middletown expenditure reports as a contracted service, not as a teacher salary item. Similar arrangements prevail, to varying extents, in other districts in the sample.[14]

In some cases, districts pay tuition to state schools, while in other cases state governments operate special schools at their own expense. Most states, for example, have state-operated schools for the deaf or the blind, and the costs of these schools appear in state government accounts, with no charges to school districts for students from within their attendance boundaries. In some cases where costs for

TABLE 8
Composition of Special Education Expenditures in Nine Sample Districts (Includes Pro-Rata State Government Expenditures)

Item	1991	1996
Special Ed. Teachers, Including Speech/Hearing/Vision Professionals	50.3%	51.7%
Special Education Teachers	48.7	48.7
Speech/Hearing/Vision Special Education Professionals	1.6	3.0
Other Special Education Professionals	6.3	7.1
Special Education Paraprofessionals	9.9	12.0
State Government Expenditures, Including State Special Schools	3.8	2.8
Regional Collaboratives ("BOCES")	4.0	7.1
Special Education Administration	5.7	4.6
Special Education Instructional Supplies and Equipment	1.1	1.2
Special Education Contracted Services	5.4	3.3
Special Education Tuitions to Private and Public Tuition Schools	5.9	4.3
Special Education Transportation	7.5	5.8
Structural Modifications (Handicap Access)	0.0	0.1
Special Education, Total	100.0%	100.0%

special education schools appear as district expenditures, they take the form of "tuition" payments. Without analyzing the expenditures of each individual state school, however, it is not possible to distinguish funds spent on "teaching" from funds spent for other services.[15]

All program data in this report include funds spent by state government (mostly on vocational education and on schools for the deaf and blind, but on a wide variety of other special education and other programs as well), and pro-rate these funds to each program in each district, based on the district's share of total elementary and secondary enrollment of all pupils in the state. These state government special education costs were 2.8% of all special education costs in 1996.

The greatest growth in share during the last five years was for paraprofessionals, who were 9.9% of special education spending in 1991 and 12.0% in 1996. District expenditure data often do not describe these aides in great detail, but we know that aides were used as credentialed "teacher assistants" (in some cases, these were students working as paraprofessionals while enrolled in college to earn full teacher credentials); as "teacher clerks," usually without direct student contact; as aides on special education buses; as "full inclusion" aides, assisting special education students who were in regular classrooms; and as preschool aides, working in legally mandated programs for special education preschool children. While dis-

tricts' 1996 expenditure reports show funds in each of these categories, precise breakdowns of paraprofessional subcategories are not reliable because of the lack of standardization. One district, for example, may include bus aides as part of its classroom aide category, while another district may make no distinction between credentialed teacher assistants and noncredentialed aides.

Some observers suggest that special education expenditure growth has been propelled, at least in part, by burgeoning administration. The data on which this report is based do not confirm this. In 1996, administration was 4.6% of special education spending. If administrative costs of special education programs run by state governments or regional collaboratives were included, administration would be slightly higher, but not significantly so. (These data do not include district-wide or school-wide administrators with responsibility for all programs, including special education.)

Variations in district expenditures for special education may be caused, in part, by different classification criteria.

It is possible that special education expenditures may be even higher than reported here if special education "encroaches" on regular education spending by consuming the time of personnel whose salaries are reported as regular education expenditures. We cannot quantify this, however, because this study could not specifically identify special education "encroachments" on districts' regular budgets. For example, if the time now spent by regular school administrators, teachers, and counselors in IEP conferences and hearings were properly charged to special education, growth of special education spending to 1996, and the share of total expenditures for special education, could seem greater. Similarly, with the expansion of "full inclusion," a greater portion of regular teachers' time is devoted to making reasonable accommodations to special education children's needs.[16] No portion of regular teachers' salaries, however, are normally reported as special education costs. With full inclusion, only the costs of paraprofessional aides or of additional special education teachers are normally reported as costs of special education.

Variations in district expenditures for special education may be caused, in part, by different classification criteria. It is unlikely, for example, that there are nearly twice as many truly handicapped or learning disabled children in Fall River and Middletown as there are in Spring Branch and Claiborne, although the former devote nearly twice the share of their budgets to special education as the latter (see Table 7). Some observers may assume this disparity is attributable to an overclassification of learning-disabled children in Northeastern districts, where schools may use special education funds to subsidize compensatory education or regular remedial programs. This may be the case. But it may also be that other districts underclassify learning-disabled students, as the recent Spring Branch negotiation over the classification of dyslexic students suggests. We make no inferences regarding the extent to which either conclusion may be valid.

CONCLUSION: IMPLICATIONS FOR THE PRODUCTIVITY OF REGULAR EDUCATION

By showing that regular education spending growth has been relatively modest, this report lends some support to claims of those who deny that schools have wasted added funds received in the last three decades. A complete analysis of school "productivity" growth (i.e., the degree to which outputs or outcomes grow relative to inputs) would require a complete analysis of school outcomes including but not limited to test scores. Such an analysis is not available. This report provides information only on the input side of the productivity equation.

By showing that regular education spending growth has been relatively modest, this report lends some support to claims of those who deny that schools have wasted added funds received in the last three decades.

Building on the findings of the earlier *Where's the Money Gone?*, this report contributes to the debate on school productivity by arguing, first, that a more appropriate measure than the consumer price index is required for measuring inflation in school spending, and, second, that overall school spending growth should not implicitly be assumed to reflect primarily the growth of regular education spending. In fact, the growing importance of special education and other programs has meant that regular education has grown consistently, and significantly, more slowly than overall school spending. The relevance for the school productivity debate is that the most widely used measures of school outcomes – test scores – primarily reflect regular education program outcomes. We do not know the efficacy of inputs to other programs, and measures of total school spending are usually interpreted in ways that overstate the inputs provided to regular education.

We acknowledged in *Where's the Money Gone?* that, even if severely handicapped children have been brought into public schools from other institutions in the last 30 years, some learning-disabled or emotionally handicapped students, even if today properly classified, would have been taught in "regular" classes in 1967. To the extent this was the case, the data in this report could implicitly understate the share of new resources going to regular education. "Special education" spending on 1996 pupils who resemble those classified as "regular" in 1967 should perhaps more accurately be counted as "regular" spending before any "then and now" comparisons are made.

But it is unknown to what extent districts included learning-disabled students in standardized testing programs in 1967, even if these children were counted as "regular." In addition, some learning-disabled children may have dropped out of school or been placed in vocational or nonacademic tracks in 1967. And it is also not known what proportion of children now classified as learning disabled represent a population that did not exist in 1967: low-birth-weight, birth trauma, or "drug" babies who survive now (though with mild learning disabilities) but who may not have survived in 1967.

Analysis of spending growth in the regular education program can help policy

makers estimate regular education productivity when they compare real spending growth with changes in commonly accepted outcome measures (like standardized test scores or attainment). In special education, however, commonly accepted outcome measures do not exist; indeed, each student has an individualized goal, specified in an IEP.

As growing enrollments and public resistance to taxation widen the gap between available resources and schools' needs, educators will be pressed to justify the efficiency of nonregular education programs. Awareness of inputs, as described in this report's program focus, should stimulate interest in the definition of outcomes by which the efficacy of spending can be measured. Primitive though our understanding of this spending may be, outcome measures, aside from regular academic test scores, are even more poorly understood, and are a high priority for further research and analysis.

ENDNOTES

1. We do not suggest that productivity gains from technology are not available in schools, but only that they are less available than in the "average" industry. The data presented in this report reveal substantial expenditures in recent years for instructional computers. There is no reason to believe, however, that these expenditures will have the effect of, or are intended to, replace teachers in the instructional process. Rather, their primary purpose is to provide students with the computer and Internet skills that they are expected to require for future workplace success. Provision of these new skills certainly reflects a productivity improvement for schools, but it does not lower the growth of school costs as if teachers were actually replaced by computers. Some replacement of teacher labor has been made possible by the increased use of lower-paid paraprofessionals to perform teachers' clerical and playground or hall-monitoring tasks, but the teacher displacement effect has been relatively modest compared to the displacement of manufacturing labor by machinery, since aides perform duties that are a relatively minor share of teachers' responsibilities.

2. In this report, we consistently use the June date to denote the end of a school year. Thus, "1967" means 1966-67, "1991" means 1990-91, and "1996" means 1995-96.

3. Readers familiar with the previous report, *Where's the Money Gone?*, will note some small differences in how we reported 1991 and 1967 data there and how we report it here. For example, our earlier report stated that special education was 17% of total spending in 1991; we now report it to be 18% (after rounding). In some cases, in questioning district officials while categorizing 1996 expenditures for the present report, we learned more about how an appropriation was used, and this caused us to reconsider how the expenditure had been categorized in previous years. For example, in one district we discovered that a 1991 expenditure we had previously interpreted as regular education classroom aides was in fact used to pay aides who functioned as hallway monitors and who had no instructional duties. Thus, we recategorized this 1991 expenditure from "regular education" to "security and violence prevention."

In addition to cases where we recategorized expenditures based on corrected information, in other cases we had to change our previously reported enrollment numbers before dividing these figures into total expenditures to generate per pupil spending estimates. For

example, between 1991 and 1996, Louisiana stopped requiring districts to collect data on opening day "registration" and switched to an actual enrollment count for October 1, a count not recorded in previous years. Fall registration and October 1 enrollment numbers can differ, both because of late registrants and because of students who are "registered" to begin school but who move or drop out during the summer. However, the state made no effort to equate these two statistics—there was no changeover year in which both types of data were reported, so we can't estimate the relationship between these types of enrollment reports. In several cases where we were presented with enrollment data that were calculated on a different basis in 1996, 1991, and 1967, we attempted, first, to convert the 1991 number to one that was comparable to 1996, even if this reduced the comparability to 1967. The result is that some 1991 data has changed in small ways from that presented in the earlier report.

4. This net services inflation of 17.3% from 1991 to 1996 represents an average annual net services inflation of 3.2%. This was slightly higher than the 3.0% average annual increase for the consumer price index, but still represents a considerable slowing of the inflation experienced by schools in the 1967 to 1991 period, when net services inflation proceeded at a 7.0% average annual rate.

5. The lack of "real" resource growth for elementary and secondary education in the nation as a whole (from $6,529 in 1991 to a nearly identical $6,576 in 1996, using the NSI adjustment) does not necessarily mean that schools had the same real resources per student in 1996. Our measurement of resources is not quality adjusted, and so we should be careful not to read too much into small differences in real resource prices. For example, a more precise measurement would also have to take into account the structure of teacher salary schedules in most school districts.

Expanding enrollment requires school districts to hire new teachers, and these teachers enter the workforce at much lower pay rates than experienced teachers. The ratio of experienced teachers' salaries to beginning teachers' salaries can, in many districts, be more than 2 to 1. But while experienced teachers represent a higher-quality input to the educational process than beginning teachers, it is unlikely that the quality of an average teacher with 20 years' experience is more than twice that of an average teacher with 2 years' experience.

If the quality (i.e., skills) of teachers increased proportionally as they moved up the salary schedule, then hiring less-experienced, lower-paid teachers would equate to proportionally fewer real resources per student. However, while education research shows that teacher quality improves as new hires gain experience, salary increases may continue after quality peaks. Thus, while schools probably suffer a loss in quality after hiring large numbers of inexperienced teachers, quality initially probably recovers somewhat faster than salaries increase in future years. But then, perhaps after five to seven years of experience, teacher quality peaks while salaries continue to progress. In sum, with broadly stagnant school spending, even if some schools suffered a decline in real resources from 1991 to 1996, they may be able to recover some or all of this decline in the near future without an equivalent gain in real per pupil spending. But in the longer run, when the average experience of teachers begins again to rise substantially (when enrollments cease increasing), real measured per pupil resources will again begin to grow because of salary increases granted to very senior teachers, without a proportional gain in teacher quality. (We say "measured" because an even more precise inflation index than the NSI would capture improvements in teacher quality as a reduction in the relative wages of teachers, and vice versa. For more on this point, see Mishel and Rothstein 1997.)

6. In this, as in our previous report, we report average data from the nine districts as a "district-weighted average," or the average of the averages calculated individually for each district, rather than (in the case of enrollment growth, for example) summing the combined enrollments for all nine districts for 1991 and then doing the same for 1996, before calculating growth. We utilize this "district-weighted" approach because each district was selected to mirror the experience of districts enrolling about 1/9 of total enrollment in the universe from which the sample was drawn. (The universe excludes districts with less than about 3,000 enrollment, and also excludes districts that could not be matched because they had different names in 1967 and in 1991, in most cases because they were consolidated with other districts during that period.) A "district-weighted average," therefore, gives each district equal weight, regardless of its size or level of expenditure. In this case, the district-weighted average enrollment growth is 5.05%; the total enrollment of all nine districts in 1996, however, was only 3.83% higher than total enrollment in 1991.

7. Interpreting 1996 Los Angeles data presented a unique problem. In 1992, an earthquake in the Northridge community destroyed some schools and disrupted many others. Following the earthquake, the Los Angeles district applied for, and received, substantial relief funds from the Federal Emergency Management Agency and other sources. The purpose of these relief funds was to enable the district to "make up" regular days lost to teaching and to cover other extraordinary costs. An assumption of these relief programs was that the district lost about 5 instructional days to the earthquake and its aftermath. Some of these compensatory relief funds were still being spent in 1996, and we decided

not to include them in this report of Los Angeles expenditures because, in principle, these funds were designed to compensate for lost resources, and, in some sense, including these funds would have been a form of "double counting." As with every district selected for study in this report, Los Angeles was chosen partly to typify expenditure patterns of about one-ninth of the universe of districts, in this case large urban mega-districts. (For detail on how the sample was selected, see *Where's the Money Gone?*) We felt that these earthquake relief funds were so extraordinarily unique that their inclusion would reduce the typicality of the district. However, we recognize that every district has unique expenditures in any year, and our method normally does not exclude such expenditures from the analysis. Had we included these earthquake expenses in this report, the nine-district average real per pupil expenditure increase, from 1991 to 1996, would change from 6.2% to 6.3%. Los Angeles, instead of showing a real per pupil expenditure decline of 6.53%, would show a real decline of 5.59%.

8. When we initially categorized expenditures for 1967 and 1991 in the preparation of *Where's the Money Gone?*, we did not create a separate category for instructional computers, not realizing the extent to which this technology would soon become a focus of educational policy. In *Where's the Money Gone?* and this report, therefore, instructional computers are lumped together with textbooks and other regular education instructional supply spending. In analyzing 1996 data, the researchers had the impression of substantial spending growth on instructional computers, and what little growth there was in regular education spending from 1991 to 1996 may have been influenced to a significant amount by such spending. There is little educational research, however, to suggest that such spending is likely to produce significant value compared, for example, to higher teacher quality or to smaller class size (especially for minority students). We cannot know for certain if our impression of a substantial portion of regular education growth being consumed by computer technology is valid without revisiting and recategorizing the data for earlier years.

9. As explained in the methodological notes of *Where's the Money Gone?*, the absence of a convention for accounting for capital expenditures is a major flaw in school finance reporting. There are no depreciation schedules for school buildings, no standard rules for distinguishing capital equipment from supplies, and no established procedures for distinguishing major maintenance costs from capital improvements. As a working rule, the data on which this report is based include "alterations and improvements" but exclude expenditures for new school construction. When either renovations or construction are paid for by bond funds, the interest payments on these bonds are included, but principal repayments are excluded, because the actual expenditures were either included (for renovations) or excluded (for new construction) at the time of expenditure. Computer purchases (for administration or for instruction) are included, with no depreciation, and assigned to the appropriate programmatic category. For some districts, therefore, our regular education expenditure report for 1996 could be inappropriately high because of the purchase of instructional computers, which properly should have been depreciated.

10. As throughout this report, this figure for school lunch and breakfast programs represents only net spending of federal, state, and local funds, after cash sale revenues have been deducted from total spending. Similarly, the report of athletic program spending represents only net expenditures, after deducting ticket sales from total spending.

This methodology causes some understatement of food service expenditures, because all district maintenance and operations expenditures (overhead) are apportioned to each program based on expenditures for that program. (For a full description of this methodology, and the reasons for it, see *Where's the Money Gone?*) Because cafeterias generally require more maintenance and custodial care than classrooms, this methodology understates food service expenditures even in the absence of cash sales. By subtracting the value of cash sales, apportioned maintenance and operations expenditures are further reduced, although a finer methodology would apportion these overhead expenditures to gross cafeteria expenditures, not net expenditures.

Because of a budget crisis that forced a decline in real per pupil spending from 1991 to 1996, the Boulder district imposed temporary student fees on all extracurricular activities for the 1995-96 school year. Our account of regular education in Boulder, therefore, includes only net expenditures, not fee-paid foreign language clubs, debate clubs, etc. Regular education extracurricular activities paid for by student fees were not included in our report of expenditures for 1996.

11. As noted in *Where's the Money Gone?*, analyses of shares of net new spending are sensitive to the deflator used to calculate real spending in different years. This analysis adjusts nominal spending using the NSI, as we do throughout this and the previous report.

12. We do not calculate the share of "net new money" going to various programs from 1991 to 1996, because, while total per pupil spending in the nine sample districts grew by 5% in this period, several programs suffered a loss of real funds, making net-new-money-per-program data difficult to interpret.

13. Perhaps surprisingly, food service expenditures declined steeply in Fall River, despite an increase in the number of students eligible for subsidized meals. In part, this drop reflects an increase in prices charged by the district to paying adult and student cafeteria customers, resulting in a reduction in net food expenditures. For the most part, however, district officials attribute the spending decline to new Massachusetts state requirements that school lunch programs serve more nutritious meals, with basic food groups represented in each lunch served. The result, district officials state, was that children found the meals unappetizing and consumption declined.

14. There has been considerable comment in recent years on excessive school spending "out of the classroom," not on direct services to students. The comment, however, may rely on faulty data. A superficial examination of Middletown expenditures (reflecting how expenditures from Middletown would be reported in national data) would show these substantial BOCES payments not as instructional classroom expenditures but as administrative nonclassroom spending. In the nine-district sample, Bettendorf also contracts to a regional collaborative for special education and some regular education services, as do many small school districts nationwide. The analysis of this report is based on a method that assigns these "contracted services" to the programs in which the services are provided, although we do not further decompose these contracted expenditures into spending for teachers, supplies, etc.

15. In one instance in the data analysis for this report, we treated a regular education expenditure differently from this treatment of special education contracted services. In 1996, a charter school opened in Fall River. Under Massachusetts' charter school law, the Fall River school district paid tuition to the charter school for those students in the district attendance area who chose to enroll. Recording these payments, as the district does, as a nonprogram specific tuition payment or contracted service would have distorted comparisons with 1991. It would, for example, have increased the share of "noninstructional" expenditures. To preserve comparability, therefore, we obtained financial records from the charter school and recorded each charter school expenditure by category, as though it were an expenditure of the Fall River district. There were a few special education students enrolled in the charter school, although a smaller proportion than in the regular Fall River district. Expenditures for these students were recorded as special education expenditures. Had we not done so, and instead recorded the charter school tuition as an "overhead" expense of the district, the district's special education expenditures would have seemed to be an even greater share of total expenditures than was in fact the case.

This will become a greater problem for district expenditure reporting as the charter school trend expands, especially in states where some charter school revenues come directly from the state and are not shown as tuition paid by school districts. In 1996, two districts in the nine-district sample, Boulder and East Baton Rouge, distributed planning grants to groups proposing to establish charter schools under new state enabling laws. In future years, if these proposed charter schools actually enroll students, and if these students are less likely to have special needs than the average student in Boulder and East Baton Rouge, extreme care will be required of school finance analysts to avoid interpreting this diversion of funds from districts to charters as reflecting an increase in the relative resources apparently devoted by districts to special education and other special needs programs.

16. It is also possible, of course, that the classroom aides provided by a full inclusion program might also assist with regular students, in which case the opposite conclusion might be drawn, i.e., that regular education classroom expenditures "encroach" on special education spending. While it seems that this is unlikely as a widespread phenomenon, empirical investigation would be necessary to confirm or reject this description.

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